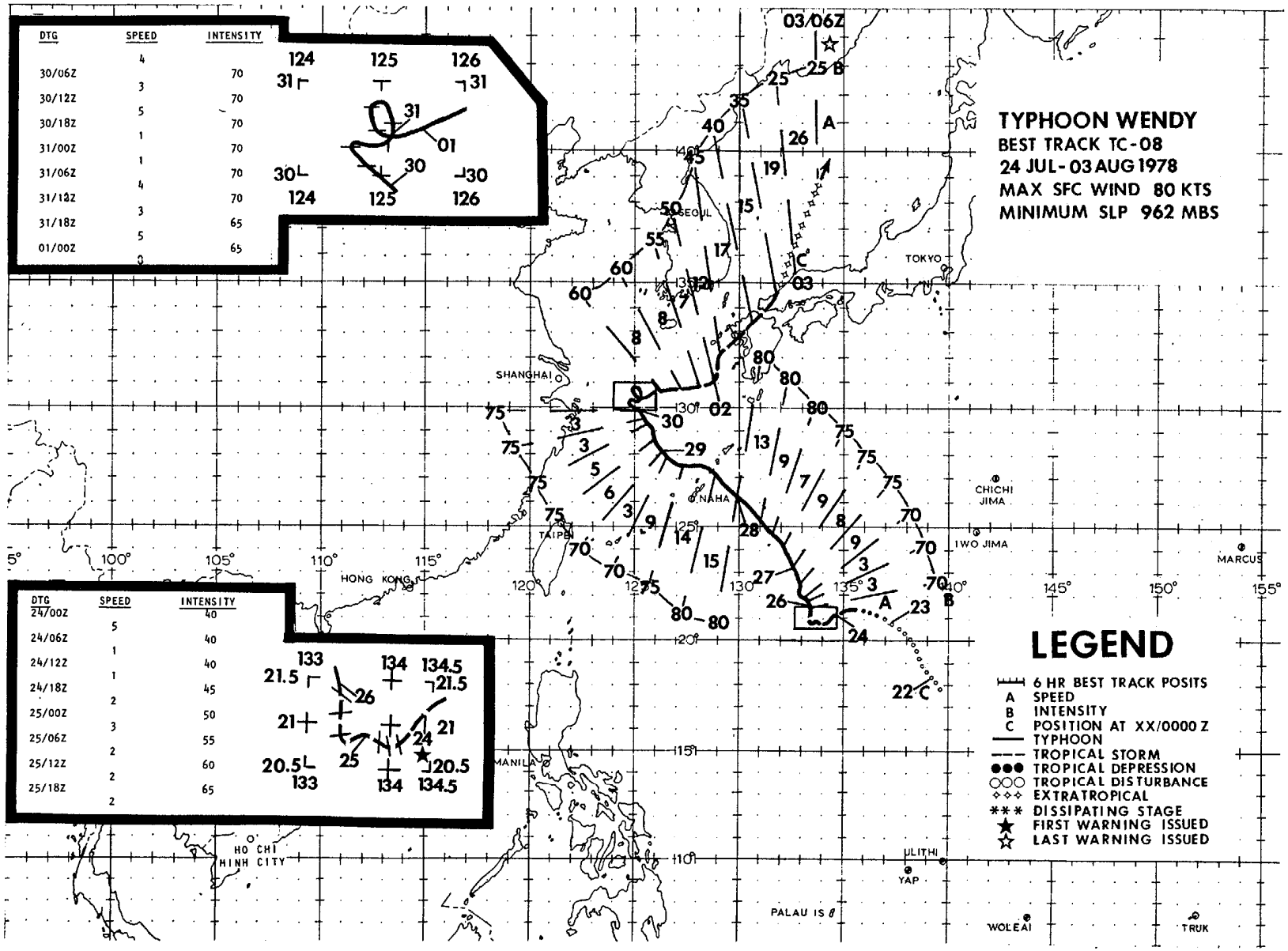
TYPHOON WENDY
BEST TRACK TC-08
24 JUL-03 AUG 1978
MAX SFC WIND 80 KTS
MINIMUM SLP 962 MBS
DTG SPEED INTENSITY
30/06Z 4 70
30/12Z 3 70
30/18Z 5 70
31/00Z 1 70
31/06Z 1 70
31/12Z 4 70
31/18Z 3 65
01/00Z 5 65
01/06Z 3 60
DTG SPEED INTENSITY
24/00Z 5 40
24/06Z 1 40
24/12Z 1 40
24/18Z 2 45
25/00Z 3 50
25/06Z 2 55
25/12Z 2 60
25/18Z 2 65
LEGEND
6 HR BEST TRACK POSITS
A SPEED
B INTENSITY
C POSITION AT XX/0000 Z
TYPHOON
TROPICAL STORM
TROPICAL DEPRESSION
TROPICAL DISTURBANCE
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED
SEOUL
TOKYO
SHANGHAI
TAIPEI
NAHA
HONG KONG
MANILA
CHICHI JIMA
IWO JIMA
MARCUS
YAP
ULITHI
WOLEAI
TRUK
PALAU IS
HO CHI MINH CITY

Wendy, the fourth typhoon of 1978, developed in a well-established monsoon trough. The trough, which had existed for seven to ten days prior to significant tropical cyclone development, laid over WESTPAC from 07N at the Dateline west-northwest over the Mariana Islands to the Luzon Straits. By 1200Z on the 22nd of July, two weak surface circulations were evident in the trough, one centered at 19.8N-138.2E which eventually became Wendy and the other at 14.5N-151.4E (Virginia). With the Tropical Upper Tropospheric Trough (TUTT) lying just to the north of the surface trough, the dynamics for significant tropical cyclone development were present.

Increased organization on the 22nd prompted the initial reconnaissance aircraft launch at 2130Z. The ARWO observed 25-30 kt (13-15 m/sec) surface winds, but could not locate a definable surface circulation center. Based on this aircraft data and the good potential for increased development a formation alert was issued at 230456Z for an area 660 nm (1222 km) northwest of Guam. The tropical cyclone developed rapidly thereafter; it reached tropical storm intensity near 231800Z (Fig. 3-8) and obtained typhoon strength by 1800Z on the 25th.

Wendy meandered westward from the 23rd till the 25th when a break developed in the subtropical ridge with the high center, northeast of Wendy, dominating and building. In response to stronger, mid-level southeasterlies, Wendy accelerated northwestward. Wendy slowly reached her maximum intensity of 80 kt (41 m/sec) during this time and maintained it for 24 hours before she began a slow weakening trend after passing over the Ryukyu Islands. A marked decrease in low-level inflow and convection near the center appeared to have affected Wendy's development at this point.

Wendy stalled again in the central East China Sea, 180 nm (333 km) east-southeast of Shanghai, when steering currents weakened. The cooler and drier environment, the decreased inflow, and finally the decrease in outflow aloft weakened Wendy. Most storms that stall in movement, intensify; Wendy weakened.

Late on the 31st, the break in the subtropical ridge became more pronounced and Wendy began to recurve northeastward at 8 kt (15 km/hr). A succession of minor, mid-level troughs first forced Wendy northward early on the 2nd of August, then accelerated her northeastward.

The cooler environment and increased frictional effects caused Wendy to weaken and lose tropical characteristics by 18Z on the 2nd after existing as a significant tropical cyclone for 10 days.

Twice during Wendy's existence (240000Z to 260000Z and 300600Z to 311800Z), she slowed significantly. The portions of the best track shown for these periods are among many possible solutions. With fix-to-fix movement near to or less than the fix accuracies, it was almost impossible to determine if Wendy just slowed to 1-3 kt (2-6 km/hr), underwent looping, or simply remained "quasi-stationary".

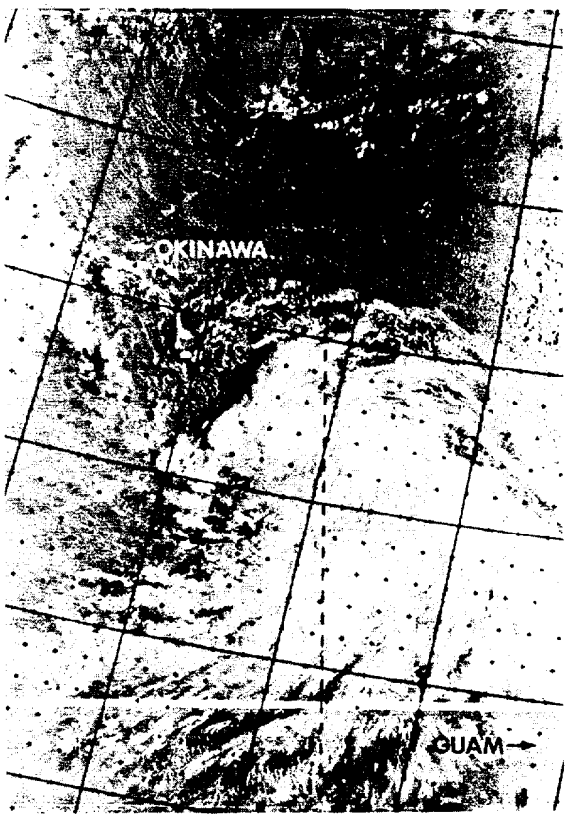

FIGURE 3-8 . Wendy as a young tropical storm, 23 July 1978, 2117Z. Typical of circulations in the monsoon trough, maximum cloudiness exists in the deep southwesterlies just south of the trough axis. (DMSP imagery)